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| 09/806,565 | 07/02/2001 | Daniel Coffman | YOR9-1999-01 | 1503 |

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2195

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,565

Applicant(s)

COFFMAN ET AL.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-59 and 97-122 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-59 and 97-122 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 97-121 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims detail a virtual machine comprising a kernel and an API. Therefore the system is a software system that is not tangible embodied and therefore non-statutory (see M.P.E.P. 2106). The claims do mention resources and communication across different platforms, applications, devices. However, the language in the claims detail that the kernel is adapted to manage resources. What an component can performed is not language to make a claim statutory since the actually functionality is not realized. In addition, there is no language in the claims that the resources are physical entities. In regards to the language of "different platforms... devices", the "or" clause precludes that the communications is across applications thereby still making the virtual machine a software system.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25-59 and 97-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORIN (U.S. Patent 5,748,841).

As to claim 25, MORIN teaches a conversational computing system, comprising: a multi-modal CUI manager (I/O manager / Dialogue Manager), operatively connected to a plurality of I/O renderers, which can receive input queries and input events (in input) across different user interface modalities of one or more active applications (applications) and generate output messages and output events (in output) in connection with the one or more active applications in one or more of the different user interface modalities (I/O manager / Dialogue manager) (col. 9, lines 1-32; col. 5, lines 49-51; col. 5, line 58 – col. 6, line 26; col. 6, lines 36-40); a conversational kernel (Dialogue Manager to an I/O Manager / central Dialogue Processor to a Dialogue Manager) for generating multi-modal dialogs in response to the input queries and input events (col. 9, lines 1-56), and for managing context associated with the one or more active applications (col. 9, lines 1-32); and a conversational interface for providing an interface between the one or more active applications (applications) and the conversational kernel (via the application manager) (see figure 1 and 2). However, MORIN does not explicitly state that the interface is an API. It would be obvious to one skilled in the art at the time of the invention that the application manager is a API since it allows applications to communicate data to the dialogue manager and vice versa.

As to claim 97, MORIN teaches a conversational virtual machine, comprising: a kernel (Dialogue Manager to an I/O Manager / central Dialogue Processor to a Dialogue

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Manager) adapted to manage dialog and context, conversational engines (several additional software modules) and resources (col. 8, lines 61-67) and communication across different platforms, applications, devices, or combinations thereof (col. 6, lines 36-40), each having one or more different user interface modalities (col. 6, lines 36-40), to provide a coordinated, universal CUI across the different user interface modalities, and an interface (via the application manager) comprising abstractions (functions) adapted to access conversational services from the kernel on behalf of the platforms, applications and devices or combinations thereof (col. 12, lines 16-40). However, MORIN does not explicitly state that the interface is an API. It would be obvious to one skilled in the art at the time of the invention that the application manager is a API since it allows applications to communicate data to the dialogue manager and vice versa.

As to claims 98 and 99, MORIN teaches the conversational virtual machine comprises a shell that executes on top of one of an operating system, real-time operating system, a virtual machine, and a conversational browser (via by being a plurality of data conversion layers that manipulate various databases / drivers) (fig. 1 and 2; col. 7, lines 5-16).

As to claim 100, MORIN teaches an engine API (functions) comprising abstractions adapted to access a conversational engine (several additional software modules, i.e. script handler, context handler, history handler, instruction interpreter,

meta-language interpreter, reference solver, uncertainty solver, and special function handler) (col. 8, lines 61-67; col. 9, lines 35-45; col. 9, line 57 – col. 11, line 40).

As to claims 101 and 102, MORIN teaches an interface for invoking functions to process multimodal events (via the dialogue processor invoking the application manager). However, MORIN does not teach the interface comprises a plurality of conversational foundation classes. Official Notice is taken in that dialogue interfaces, i.e. speech API, is well known in the art and contains foundation classes and therefore would be obvious in view of MORIN in order to execute multimodal events to the application.

As to claim 103, MORIN teaches the conversational aware applications and dialog components are implemented one of a declaratively, imperatively, and a combination thereof (col. 13, lines 29-43).

As to claim 104, MORIN teaches the kernel comprises a task manager adapted to drive a conversational engine and a task, process or thread running on the conversational virtual machine (via using the several additional software modules to handle the input / invoking the applications task manager) (col. 8, lines 61-67; col. 9, lines 35-45; col. 9, line 57 – col. 11, line 40; col. 13, lines 50-53).

As to claim 105, MORIN teaches the kernel comprises a resource manager adapted to manage one of local resources, distributed resources, and both; and an I/O manager adapted to managing multimodal I/O events (via using the several additional software modules to handle the input / invoking the applications resources and devices) (col. 8, lines 61-67; col. 9, lines 35-45; col. 9, line 57 – col. 11, line 40; col. 13, lines 61-67).

As to claim 106, MORIN teaches the kernel comprises a dialog manager adapted to manage conversational dialog across registered applications; and a context stack for maintaining the context of an active application or task under the control of the dialog manager (via the dialogue manager or central dialogue processor using the services of several additional software modules, lines - in particular the context handler or history handler to manage a dialogue context) (col. 8, lines 55-67; col. 10, lines 1-25).

As to claim 107, MORIN teaches the kernel comprises an arbitrator for arbitrating a target application of an I/O event between the registered applications (via using the application manager by the dialogue manager or dialogue processor to invoke functions of the application based on the event) (see figure 1 and 2; col. 9, lines 1-55; col. 12, lines 16-40).

As to claims 108-115, MORIN teaches the API comprises conversational protocols adapted to provide distribution of the conversational virtual machine (via the

dialogue manager/server and application of the acquisition system being separate from one another) (see figure 1 and 2).

As to claims 116-120, MORIN teaches the conversational virtual machine is implemented as program code comprising one of a programming language, scripts, and a combination thereof in an ASCII form (col. 7, lines 28-35).

As to claims 121 and 122, MORIN teaches the conversational virtual machine is implemented as an interface (via the application manager) for a UCRC, wherein the UCRC is used to control home appliances that are conversationally aware (via the system assisting the user in acquiring the language of an application and invoking functions of the application and its peripherals) (abstract / fig. 1). It would be obvious to one skilled in the art at the time of the invention that a peripheral is a PDA device.

As to claims 26, 40, and 41, MORIN teaches a plurality of conversational engines, i.e. NLU and NLG engines (additional software modules), wherein the conversational kernel controls and accesses the conversational engines to process the input queries and input events and to generate the multi-modal dialog and output events (several additional software modules, i.e. script handler, context handler, history handler, instruction interpreter, meta-language interpreter, reference solver, uncertainty solver, and special function handler) (col. 8, lines 61-67; col. 9, lines 35-45; col. 9, line 57 – col. 11, line 40).

As to claims 27 and 28, MORIN teaches the conversational kernel provides conversational services and behaviors that are accessible by an application through the conversational API (via the application manager) (see figure 1 and 2; col. 12, lines 16-40).

As to claims 29-33, MORIN teaches an interface for invoking functions to process multimodal events (via the dialogue processor invoking the application manager). However, MORIN does not teach the interface comprises a plurality of conversational foundation classes. Official Notice is taken in that dialogue interfaces, i.e. speech API, is well known in the art and contains foundation classes and therefore would be obvious in view of MORIN in order to execute multimodal events to the application.

As to claims 34-36, MORIN teaches the conversational virtual machine comprises a shell that executes on top of one of an operating system, real-time operating system, a virtual machine, and a conversational browser (via by being a plurality of data conversion layers that manipulate various databases / drivers) (fig. 1 and 2; col. 7, lines 5-16).

As to claims 37-39, MORIN teaches a plurality of I/O resources; and an I/O API for interfacing with the plurality of I/O resources and for registering the plurality of I/O

resources with the conversational kernel (via using the several additional software modules to handle the input / invoking the applications resources and devices) (col. 8, lines 61-67; col. 9, lines 35-45; col. 9, line 57 – col. 11, line 40; col. 13, lines 61-67).

As to claims 42-52, MORIN teaches the kernel comprises a dialog manager adapted to manage conversational dialog across registered applications; a resource manager; a task dispatcher, and a context stack for maintaining the context of an active application or task under the control of the dialog manager (via the dialogue manager or central dialogue processor using the services of several additional software modules, lines - in particular the context handler or history handler to manage a dialogue context) (col. 8, lines 55-67; col. 10, lines 1-25; see Fig. 1 and 2).

As to claims 53-59, MORIN teaches a communication stack that implements conversational protocols for exchanging information with a conversationally aware system, wherein the conversationally aware system comprises one of a remote application (application), a remote device, a remote conversational computing system, and a combination thereof (see fig. 1 and 2).

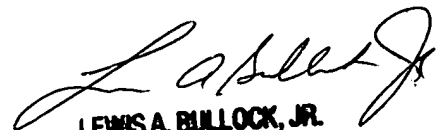
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 2, 2005



LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER